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ASTHENOPIA, ITS CAUSE AND TREATMENT.

[Principally made up from articles published by Professor Donders, and Lectures delivered by Professor von Graefe on the subject. Communicated for the Boston Medical and Surgical Journal.]

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THE attention of oculists, as well as that of general practitioners, has long been attracted to a peculiar form of disease, the symptoms of which are exceedingly characteristic. The eye presents a perfectly normal appearance; its movements are unrestricted; convergence of the axes of vision takes place without difficulty; the perception of objects is generally as perfect as ever; and yet, in spite of all this, reading, writing, or any other employment requiring near objects to be viewed, induces fatigue; objects become confused and indistinct, and a sense of tension is felt above the eyes. Such a height does this reach, that temporary relinquishment of the employment is rendered necessary. After resting a few moments, vision becomes again distinct, but the same symptoms develope themselves again sooner than before. The amount of labor that can be performed is directly proportional to the amount of rest that has been taken.

As long as the eyes are not employed on near objects vision appears normal, and no disagreeable sensation is experienced. No sooner, however, does the patient, regardless of what he has experienced, attempt to continue his previous occupation, than the symptoms become more and more pronounced; the pain in the forehead grows more intense; the eyes become red, and tears flow freely; yet the eyes themselves are rarely painful. As this condition becomes more aggravated, the patient is obliged to close his eyes, and pass his hand over his forehead. Has too persistent an effort been made, all work on near objects must be given up for a considerable period.

This condition was at first regarded as a species of amblyopia, and was called *hebetudo visus, amblyopie presbytique*, or *amblyopie par presbytie*. Its real nature remained, however, a mystery.

Mackenzie came nearer the truth in stating that the seat of this disease was probably to be looked for in the organ or organs of the accommodation, that is, the power possessed by the eye of adapting itself to different distances. The majority of oculists signified their approval of this theory, but remained in ignorance of the true nature of the disease. They remarked, it is true, that the accommodation became quickly fatigued, and that convex glasses (the use of which Mackenzie discouraged) alleviated the symptoms partially or entirely; the idea, however, never occurred to them, that an abnormal structure of the eye lay at the root of the whole matter.

To form a just conception of this, at first sight, somewhat startling proposition, a brief *resumé* of the more recent views concerning the accommodation of the eye, and its anomalies of refraction, will not be out of place.

Till within a very few years the most dissimilar doctrines have prevailed as to the nature of the power possessed by the eye of so altering its state of refraction as to bring rays, coming from different distances, to a union on the retina. This has been successively supposed to reside in the cornea, the iris, the lens, the "layers of the vitreous," and the recti and oblique muscles. Myopia and presbyopia were supposed to be two opposite conditions; the one compelling an object to be held nearer to, the other farther from the eye, for the purpose of distinct vision.

The results of modern investigation show—

That the agent in the act of accommodation is the crystalline lens, which varies its convexity without changing its position. That where objects are so distant from the eye that the rays coming from them may practically be regarded as parallel, such rays are brought to a focus on the retina without any accommodative effort; and that the nearer the object approaches the eye, the greater will be the strain on the accommodation. And while the far point, or limit of distinct vision of a normal eye, may thus be said to lie in infinity (rays coming from an infinite distance being parallel), the near point of such eye—i. e. the nearest point for which it can accommodate—progressively recedes with advancing age; constituting presbyopia when it has increased its distance from the eye so much as to cause inconvenience.

Thus in an ideal eye the farthest point of vision should lie in infinity; that is, the eye, when adapted for its farthest point, should possess the power of bringing parallel rays to a union on the retina, without accommodative effort.

Relatively few eyes, however, correspond to this ideal. Parallel rays, entering some eyes adapted for their farthest point, are brought to a union *before* the retina, so that only *divergent* rays, proceeding from objects relatively near, can form perfect images on its surface. And parallel rays, entering other eyes whose accommodative power is similarly relaxed, find their point of union

behind the retina, to form perfect pictures on which, the rays should enter the eye *converging*.

Both of these conditions depend on a defect in structure of the eye concerned. The first defines myopia; for the second, Donders has proposed the name of hypermetropia; and presbyopia may exist in connection with either. In the first case the far point lies *this side of*, in the second *beyond* infinity. The first requires a concave, the second a convex glass in order to see distinctly in the distance. It is with the last, or hypermetropia, that we have to do.

Although recognized as early as 1853 as an abnormal condition of the eye, and a year or two later described with much ability by Stellwag von Carion (*Ophthalmologie*, vol. ii., p. 371), Donders was the first to point out the fact, that the occurrence of hypermetropia in a moderate degree* was far more common than was generally supposed; and that, as such, it lay at the bottom of a difficulty, which, under the various names of asthenopia, kopiopia, lassitude oculaire, amblyopia, presbytique, weaksightedness, morbid sensibility of the retina, &c. &c., had played a rôle of no little importance among the comparatively less understood diseases of the eye. In 1858 he first enunciated the doctrine, that the great majority of cases of asthenopia would be found to be associated with this abnormal structure of the eye. And in 1860 he so far extended the application of the rule, as to almost deny the possibility of the one condition existing independently of the other; stating that in no one of the last hundred cases examined by him had hypermetropia, to a marked degree, been absent. And the researches of others in this field have confirmed its presence in at least twenty-nine out of every thirty cases.

Rays proceed from all objects in nature divergent, or at the most parallel, and this only from objects at an infinite distance. The eye is consequently not called upon to adapt itself for the reception of convergent rays. It fulfils all necessities when it brings tolerably divergent rays to union on its retina; and, besides this, can sufficiently relax its accommodation for the reception of parallel rays; if it can do more, it has overstepped its office, the eye possesses a useless power, and one that materially interferes with its original usefulness.

Want of space renders it impossible to rehearse fully the reasoning by which Donders accounts for the existence of asthenopia in a hypermetropic eye. It is well known that the amount of accommodation we can bring to bear on an object at any given distance depends, in great measure, on the angle at which it is ne-

* The degree of the hypermetropia or myopia present in a given case is expressed by the focal distance of the convex or concave lens, which reduces the eye, thus affected to a normal eye; viz., in hypermetropia the strongest convex, and in myopia the weakest concave glass, through which the patient sees distinctly in the distance. The degree of presbyopia is expressed by that convex lens which brings the near point of the eye back to eight inches, and which may easily be computed. Thus, supposing the near point of the eye to have advanced to 12 inches, then the presbyopia $= \frac{1}{12} - \frac{1}{8} = -\frac{1}{24}$; and a positive glass of 24 inches focus brings the near point back to about 8 inches.

cessary to converge the axes of vision, in order to regard that object; the rule being, that the two go, to a great extent, hand in hand; and that, the greater the convergence, the more accommodation we can bring into play. We distinguish between *absolute* and *relative* accommodation; *absolute* being the whole amount of accommodation that exists, under the most favorable circumstances, the near point being taken at the greatest possible convergence of the visual axes, and the far point at their nearest approach to parallelism; while *relative* accommodation is the amount that can be made use of at any one fixed convergence of the axes of vision. Now it is found by experiment and observation, that where normal eyes need, for a given convergence, half their *relative* accommodation, hypermetropic eyes are obliged to use seven-eighths, or even more, which greatly fatigues them; and that the cause of the asthenopic symptoms is thus simply a want of proportion between the convergence of the axes of vision and the amount of relative accommodation that is obliged to be brought into play.

Treatment.—In former times, when hypermetropia was either unknown or misconstrued, positive glasses were interdicted for distant objects, and only those very weak were used for the near ones. The relief thus afforded would naturally be exceedingly slight. But now that the nature of the difficulty is completely understood, we have only to bear in mind the object to be effected, viz., the relieving the accommodation of an unnatural strain, and the restoring of the proper harmony between it and the convergence of the axes of vision. The treatment thus becomes simple, and may be explained in a few words. We give the patient the glass that expresses the degree of his hypermetropia, for constant use. The strongest convex lens with which he sees distinctly in the distance reduces his eye to one which needs no glass for either near or remote objects; and it is gratifying to observe the complete alleviation of the asthenopic symptoms, which almost always follows its judicious employment. Should, however, the patient possess only a limited power of accommodation, a stronger lens will be needed for work on near objects; and a simple mathematical process enables us to compute the glass with which he shall be able to work in a given distance, and in so doing bring into play not more than one third of the whole amount of his accommodation.

NOTE.—Much difficulty is occasionally experienced in determining the strongest glass with which the hypermetrop can see in the distance. These patients are so accustomed to using a portion of their accommodation when looking at distant objects, that they continue so to do, even when the necessity is obviated by glasses being held before their eyes. In such cases a solution of atropine, sufficiently strong to paralyze the accommodation, must be instilled into the eye before the trial is made. Donders relates cases where, at first, a convex lens of 24 inches focus was preferred to one of

20, by the patient, for regarding distant objects; where one of 16 and one of 12 permitted but imperfect vision, but where, after the employment of atropine, one of 6 inches focus was found to be the glass required.

January 2d, 1862.

DR. COALE'S ESSAY ON ANEURISM.

(TREATMENT.—Continued from page 410.)

Galvano-Puncture.—There was some doubt in our mind as to whether we should not put galvano-puncture among those remedies for aneurism which had been tried and found wanting. Its failures, it is true, have been many and great, but its successes have been equally marked and remarkable, and we feel, too, that improvements may be introduced into the way of applying it, which will do away with some of the objections to its use.

Electricity had been applied for the cure of aneurism very many years ago, by Liston and Phillips. We have not been able to find their original communications upon the subject, but it will suffice to say, their experiments were wholly unsuccessful, and the project was abandoned entirely by them.

Brande had shown that in any of its solutions subjected to the galvanic current, albumen came to the positive pole in a coagulated state. Velpeau, acting upon this, introduced needles which formed the poles of a galvanic battery into aneurisms artificially produced, and into the bloodvessels of rabbits. He found the almost invariable result was, to plug up the vessel, or to solidify the collection of blood.

Petrequin, of Lyons, applied the process to the human subject, and in 1846 gave his first paper upon the subject to the world.* He used two, and sometimes four, needles, introduced from opposite sides of the tumor, and attached respectively to opposite poles of a galvanic battery. This battery was composed of a series of plates, on one occasion twenty-two pairs being used, each plate four inches in diameter.

M. Petrequin published a series of papers on this subject, exhibiting the progress and result of his investigations, in the *Archives Médicale*, and the *Bulletin de Thérapeutique*, from the year 1846 to 1849. To these we would refer the reader for details which we do not think necessary to give here. The results we will strive to exhibit fairly. Several cases in which any other course would have been almost wholly impracticable, have been completely cured by galvano-puncture. One, reported by M. Abeille, is very satisfactory. It was a subclavian aneurism, in a woman aged 65. After the application of the needles for the space of thirty-

* Archives Générales, September, 1846.

seven minutes, the tumor was found to be hard, resistant, and destitute of pulsation. The operation, however, was attended with horrible suffering, which even chloroform did not control. The tumor entirely disappeared in thirty-seven days, and the cure remained perfect at the end of three years—the date of the report.

M. Gimelle made a report to the Academy of Medicine upon this case, in which he reviewed the various cases in which galvanism had been employed, and quotes several that were unsuccessful in M. Petrequin's hands, whilst with other surgeons violent inflammation, suppuration and gangrene occurred. Velpeau related that he had lost a case from inflammation of the sac in popliteal aneurism, and yet considered it valuable as a *dernier ressort* in cases like the above, where ligature was inadmissible. And this seems to have been the view of Robert, Laugier and several others who had tried it with more or less ill success.

The next notice of importance we had of galvano-puncture in aneurism is in the third volume of the *Mémoires de la Société de Chirurgie de Paris*, 1852. This was likewise a report made to the Society by M. Boinet, upon a case offered by M. Vial, who had operated successfully, and stated that he believed if the operation had not met with the success it deserved, it arose from the pain, inflammation, suppuration, gangrene, and which he considers due entirely to a faulty mode of operating. The alterations he proposes are, that the galvanism should be used for a shorter time, but oftener. The case he gives in illustration was one of varicose aneurism from puncturing the brachial artery in bleeding. The needles were applied for seven minutes at a time on four different days, but the pain was so great that after the last time the patient refused to submit to it again. Compression was then applied to prevent relapse, and the cure confirmed. M. Boinet in his summary upon M. Vial's case is by no means favorable to the operation. He rehearses Petrequin's own cases in support of this view. The first was for aneurism of the ophthalmic artery, for which the carotid had been tied in vain. Galvanism was applied July 19th. Pain and ecchymosis followed, the pulsation and bruit continued, and on August 14th a violent fever put an end to the life of the patient. We merely comment that we see no connection between the remedy and fever.

The next case was aneurism of the temporal artery. Application was made for ten minutes, and two days afterwards the tumor had disappeared.

In the third case, four needles were used; the tumor became hard, and pulsation ceased in a quarter of an hour. Afterwards, the sac become inflamed, and much fœtid pus was discharged from the apertures, caused by the falling off of the eschars produced by the needles. The tumor disappeared twenty days after the application, leaving the brachial artery pulsating naturally.

The fourth case cited was popliteal aneurism. Cold and com-

pression had already been tried. Four needles were applied, and the tumor speedily solidified.

The fifth was a case of brachial aneurism after bleeding, and the cure complete. The sixth was of the same kind; compression had been used, leaving the skin thin, red and adherent. Forty days after the application, there was normal pulsation of the artery.

M. Boinet's summary from the 32 cases is as follows:—21 unsuccessful; 10 successful; 1 not known, and he thinks from that unsuccessful. Three cases have been published since these, one of which was successful, but accompanied by serious symptoms; and in the other two, such alarming effects were produced that the ligature was resorted to without delay.

In England, the use of galvano-puncture in aneurism does not seem ever to have had much favor, and the English journals are very destitute of anything that would throw light upon the subject. One interesting and successful case is given by Mr. Edmund M. Eyre, occurring in India. It was an aneurism of the external iliac, the size of a fowl's egg. Signorini's tourniquet had been applied to the tumor month after month, without any change. On September 4th, two fine long needles were introduced an inch within the sac. Pain and violent agitation of the whole body followed. The needles were withdrawn in twenty minutes, and pulsation continued. On the 8th, the tumor was still painful, and the patient in a nervous and depressed condition, and could not sleep. Leeches were applied and sedatives administered. On the 16th, there was much constitutional disturbance, but on the 19th, inflammation was subdued, leaving the tumor larger, though pulsation was not so strong. 27th, tumor harder, pulsation fainter. October 11th, no pulsation for three days. Tumor hard, and diminishing. Five months afterwards, the tumor was like an enlarged inguinal gland. The cure here was effected, not evidently by coagulating the blood, but by inflammation and deposit of lymph. The machine used was the electro-magnetic coil at a very low power.

In Germany, this method of cure has received favor, and in a paper of Dr. Werner Steinlein we find the following facts, given with a view to effect an improvement in the manner of applying the agent. It appears that two German chemists, Baumgarten and Wurtenburg, made some experiments upon the coagulation of the albumen of the blood, with the following results:—

1st. If the negative pole be introduced alone into the vessel, the positive being applied against the neighboring parts, there was no coagulation.

2d. The two poles introduced into the vessel, produced slow, feeble, and rarely complete coagulation. (This surely was not the result of Petrequin's operation just detailed.)

3d. The positive pole introduced alone, produced rapid and complete coagulation.

The operation Steinlein bases upon these results is, to introduce into the tumor a number of needles connected with the positive pole of a battery. The negative pole should be supplied with a plate of platinum, which is to be placed upon the skin in the neighborhood, after having increased the conducting power of the epidermis by moistening it with a saline or acidulous solution.*

These are all the important facts and commentaries that we find worth quoting in the various Journals of our profession up to the present day. They are meagre when we consider the importance of the subject, and the promises held out by the operation *à priori*, or when viewed through several of the cases we have related. After taking an unbiassed view of the whole matter, we cannot help feeling still hopeful that galvano-puncture may prove an efficient and highly available means of combating aneurism. The objections to it, as presented in the cases just related, are the pain it causes, and the inflammation, suppuration and sloughing that may follow its use. Otherwise, it does what it promises to do, and does it thoroughly and efficiently. It causes the blood in the sac to coagulate, stops the current through it, and, as far as *this can* cure the disease, does so. It does this, too, without any previous cutting, an operation in itself painful and dangerous. The introduction of the needles is a simple, innocuous proceeding, can be effected when a ligature is entirely out of the question, and when compression could only be applied imperfectly and ineffectually. The question then naturally occurs, can these objections—pain, chance of inflammation, &c.—be done away with? We think they can, and that Steinlein's remarks point to the way. In the cases related, where these concomitants were so persistent, it seems to us that the battery used was not of the right kind. As a first objection, it was too powerful—and as a second, the plates were too large or too numerous, exciting thus violent and calorimotic effects instead of gentle chemical action. We need scarcely to call to mind the fact, that the larger the plates the more heat engendered. This is not what we want. What we look for in a battery for this particular purpose is a decomposing one which will confine its effects to this end, and not excite the violent stimulation to the part, and general perturbation, which these seem to have done. The battery used, too, should be so arranged that the amount of energy may be under perfect control, a point apparently not attended to by operators hitherto. The remedy being modified in these particulars, a thing which seems to us perfectly possible, we would esteem it as very valuable; and indeed could it be perfected to the point of producing coagulation of the contents of the sac without the untoward effects mentioned,

* Medical Times and Gazette, Dec. 16th, 1854, from a German Journal.

we would rank it, in our estimation, *the first* amongst our remedies for aneurism. With these possibilities held out, we do not conceive we have misplaced galvano-puncture by putting it here, and we hope that our exhibition of it, frankly and fully, may stimulate others to achieve with it greater and more perfect success.

Styptics used within the Sac.—From the earliest times, efforts have been made to discover remedies that would staunch the effusion of blood. Long before it was known or even cared for upon what principle they did it, or what process was gone through in doing it, various liquids, vulneraries as they were called, were recommended for pouring into flesh wounds to arrest the hæmorrhage and to favor the healing of the wound. Many such liquids have, in their day, enjoyed great reputation and then been found deficient, and have been replaced by others whose fame has been similarly evanescent. Of late years, chemistry has exerted its powers to furnish the surgeons with efficient styptics, and has succeeded in supplying a most powerful one in the perchloride of iron. This article is obtained by a formula originally devised by M. Burin de Buisson of Lyons, which we need not give in full. It separates from the sulphate of iron a pure peroxide, and then dissolves this in white hydrochloric acid. The result is a liquid of a dark brown color when looked at in bulk, but of a rich greenish gold hue when held up to the light. It is powerfully astringent, and so actively coagulating in its effects, that if five or six drops be mixed with the white of an egg, diluted by double its weight of water, the whole will be converted into a thick mass.

Finding so powerful an astringent, it occurred to M. Pravaz, of Lyons, that it might be introduced with efficacy into aneurismal sacs to solidify their contents and obstruct the circulation through them.

At a meeting of the Surgical Society, of Paris, in May, 1853, M. Debout exhibited the two carotids of a horse, into which perchloride of iron had been injected. Into one of these vessels, the artery being held two inches above and below, six drops had been thrown. A clot had formed, but had been carried into the circulation upon removing the compression above. The lining membrane of the vessel was healthy, except at a small spot where an abscess seemed about to form. Into the other carotid fifteen drops had been injected, in a space two and a half inches long. This vessel remained plugged as long as the animal lived, and after death the whole clot was found adherent to the walls—the lining membrane being the seat of suppurative inflammation, and the vessel perfectly obliterated above and below by adhesive inflammation. Three successful cases are given in the same paper, which was read by M. Lallemand, who highly approved of the suggestion. One of the cases was of varicose aneurism at the bend of the elbow, another a popliteal aneurism, and the third one of the superior orbital artery.

Six months after this (Nov. 8th, 1853), Malgaigne read a paper before the Academy of Medicine which did not seem to confirm the promises held out in previous experiments with the perchloride of iron. Velpeau had tried it on a varicose aneurism at the bend of the elbow. The artery was compressed above and below, and eight drops injected, but, on removing the compression, pulsation returned. No bad effects followed, and on the eleventh day ten drops more were injected. The aneurism increased; a ligature was attempted, but the sac burst, and the patient narrowly escaped death.

Lenoir tried the same on a popliteal aneurism; seven drops were injected with no effect, and afterwards sixteen drops more, but equally inefficiently. Obtaining some more of the perchloride, but of a different make, the injection was repeated; violent inflammation ensued, and death resulted ten days after the last injection.

At the St. Andre Hospital, at Bordeaux, a brachial aneurism was injected with six drops, and immediately became hard. Two days afterwards seven more were used, and tremendous inflammation followed, and a ligature had to be applied as a precaution to the artery.

Another unsuccessful case is given by the same operator, M. Soule, and one, also, by M. Alquie, of Montpelier. M. Dafour also reports one that inflamed and burst, destroying the patient; M. Jobert one which caused gangrene of the limb and death, and another in which this was imminently threatened, but averted. The result has been 11 operations, 4 deaths, 5 serious complications, 2 cures, and these last with narrow escapes from serious damage.

With these results we shall have discarded this means of treatment as not being recommended to us by any peculiar advantages, and, even now, we do not consider that it offers any excellences which are not embraced in other procedures. Why we have introduced it here is, that it still has its advocates among the French surgeons, who find ready excuses for the untoward circumstances attending its use hitherto. By some it was thought that there was an excess of hydrochloric acid in the preparation. Others were of opinion that the injection should be made, not in the sac, but in the artery above, separating it from the sac and from the heart by compression for the time being—a thing clearly impossible in many cases. Even could its danger be lessened by such precautions, we cannot see its great excellence, or what advantage it holds out over galvano-puncture. The operation in the last is not greater than the introduction of the nozzle of the syringe, and the agent is much more under control. For our part, we have given a fair statement of what has been attained by it so far, and leave it to others to add to the catalogue of its effects. In other affections, or in operations where a powerful astringent

is wanted, we must say that nothing could exceed the excellence and efficiency of the perchloride of iron.

[To be continued.]

Reports of Medical Societies.

EXTRACTS FROM THE RECORDS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT. BY FRANCIS MINOT, M.D., SECRETARY.

Nov. 25th. *African Idiot.*—Dr. JACKSON gave some account of the individual who is now being exhibited in this city, and who came from Barnum's Museum, New York. The attendant states that he was brought from about 500 miles up the Gambia river, Africa. A colored, showman's lithograph was exhibited, which, Dr. J. said, gave a very faithful representation of his general appearance; his stunted condition, which belongs to him as a perfect idiot, being well contrasted with the height of the visitors who surround him. His color is a dark-brown; his features well developed and African, though not strongly so; his expression happy, with a look of perfect health, as if he was well cared for; his tongue often protruding from his half-open mouth, as is frequently seen in the acephalous fœtus; and his cranium one of the smallest, and formed as usual in such cases. He has all his teeth but his "wisdom teeth," as in the case of a young adult, his age, of course, being a matter of inference only; and he has this very remarkable peculiarity, that, when he closes his jaws, the incisor teeth do not come together by about half an inch, but leave an elliptical opening, as in the Chimpanzee. Without pretending to support Mr. Barnum's theory, that the individual forms a link between man and the monkey, and of which he probably knows full well the value, scientific as well as pecuniary, it may be further stated that, as in the higher simiæ, though not to the same extent, the elbow- and the knee-joints cannot be fully extended, and the calves of the legs, as is well shown in the figure, are remarkably deficient.

In regard to his habits and developments, the attendant states that he never makes any articulate sounds, that he takes chiefly vegetable food, but is fond of raw meat; that he has to be taken out every two or three hours to urinate or evacuate his bowels; that he sleeps well; and that he has hair about the pubes, with an occasional erection of the penis; he has, however, never known him to have an emission, nor to show any tendency to masturbation.

The following measurements were taken with callipers, &c.; and are the more satisfactory, as the head seems to be kept shaved. As these were reported, corresponding measurements were taken of the cast of the head of an idiot from the Society's Cabinet, and it will be seen that the individual now on exhibition is decidedly the most remarkable of the two; the cast was that of a girl, aged 17 years, from Cork. The measurements of this last will be, for distinction, in brackets. From between the eyebrows to the most prominent part of the back of the head, $4\frac{7}{8}$ [$5\frac{1}{2}$] inches. Between the orifices of the ears, $3\frac{7}{8}$ [$4\frac{1}{8}$] inches; this measurement is large, as the callipers would open on being removed, if they were fairly introduced even into the conchæ. Chin to vertex, $6\frac{7}{8}$ [$7\frac{1}{2}$] inches; chin to top of ear, $6\frac{1}{4}$ [$5\frac{1}{2}$] inches; and

top of the ear to vertex, $1\frac{3}{4}$ [$2\frac{1}{2}$] inches. Circumference of head at brows, horizontally, an inelastic measuring tape passing just above the adherent portion of the external ear, $14\frac{1}{4}$ [$15\frac{3}{4}$] inches. From the orifice of one external ear to that of the other, over the top of the head, $6\frac{1}{2}$ [10] inches. The height of the individual is 3 feet 9 inches; and one of the upper extremities measures, from the acromion process to the tip of the middle finger, 22 inches, following the curve at the elbow.

Dec. 9th. *Chronic Ulcer in the Stomach.*—The specimen was shown by Dr. Jackson, who received it from Dr. D. W. Thayer. The ulcer commenced just at the pylorus, was of a circular form, and involved almost the entire circumference of the organ. The pancreas formed the base, and the ulceration had probably extended into it; for there existed quite a cavity, the diameter of which was greater than that of the ulcer itself. There was very little if any thickening or induration of the parietes about the ulcer; but the base was quite dense and perfectly smooth, with a free opening upon one side into the peritoneal cavity. The organ was otherwise healthy, and the other organs were sufficiently so. There were, however, old peritoneal adhesions, and acute peritonitis.

The patient was a gentleman, 72 years of age, who had kept some notes of his case, from which it appeared that he had been subject to occasional pain in the abdomen for the last eighteen or twenty years, and coming on with more or less severity two and a half or three hours after he took food. For many years he had pain only in the spring and autumn; and it was generally moderate, but sometimes severe, especially when he had taken cold. Oct. 29th, 1858, pain in the epigastrium is recorded; on the 31st, he vomited "two quarts of dark, sour water," and had no appetite.

On the 2d of Nov., 1858, he was seen by Dr. J. Bigelow, who found him in bed, with a very morbid countenance, and suffering, as he supposed, from an incurable and probably malignant disease of the stomach. There was a vomiting of blackish matter, probably blood; and there was a very distinct tumor in the epigastrium. Dr. B., who reported the case at the time to the Society, stated the remarkable fact that this last disappeared in the course of a week or ten days; and, the patient being otherwise relieved, his attendance was discontinued. This change in the case of course threw a doubt over the diagnosis. The symptoms of perforation were less marked than usual; the patient having been out, and about as well as usual, a few days before.

Dec. 9th. *Tumors in the Stomach of a Tiger.*—Specimen shown by Dr. Jackson. The animal, with many others, probably died from suffocation at the late destruction by fire of a menagerie in this city. The tumors, six in number, were scattered throughout the body of the organ. They were quite defined, of a nearly circular form, from about three-fourths of an inch to one and a half inch in diameter, and projected very prominently into the cavity of the organ, but not at all externally; nor were there any peritoneal adhesions about them. Three of them having been cut through, were white, very dense, apparently fibro-cellular in structure, and without the slightest appearance of malignant disease; the others had the same feel. They were evidently formed in the submucous cellular tissue, though the muscular and mucous coats had become attached in all excepting the small-

est, and which was undoubtedly the one last formed. The most remarkable peculiarity in these tumors was the formation of a deep, defined central cavity, of considerable size, existing in four, with an apparent indication of it in a fifth, in the form of a dark-gray line; in the smallest tumor there was no distinct trace even of such a line. The cavity opened always upon the summit or centre of the tumor, and in two the orifice was so small, though the cavity within was of considerable size, that the idea of a follicular origin was suggested, though altogether precluded by the general character of the formations. The two smaller tumors certainly seemed to show that the cavity was a secondary formation. In the centre of one of the two largest was a deep, defined old cavity, about three-fourths of an inch in diameter; and in the hard base of it was a small opening leading into another cavity that was still deeper and of considerable size.

Another curious fact was the crowding of the cavity of three of the tumors with some kind of small parasite; in accordance with the well-known tendency that some species have to crawl into any opening that they may happen to find in the parietes of the alimentary canal. Four small ulcers were shown upon the surface of one of the largest tumors, just penetrating to the dense mass beneath; but otherwise the mucous membrane over the tumors generally was quite healthy, as it was elsewhere.

In connection with this case, Dr. J. referred to one that was formerly reported to the Society by Dr. C. E. Ware (*Boston Medical and Surgical Journal* for Aug. 26th, 1858); a Hospital patient, and in whom a dense fibroid tumor, about half as large as the fist, stood directly out into the cavity of the stomach; the mass being formed in the submucous cellular tissue, and having in its centre a cavity of considerable size. The tumor was very distinctly felt during life, though latent in regard to symptoms; the patient dying of disease altogether foreign to the stomach.

Dec. 9th. *Rupture of one of the Aortic Valves.*—Dr. Ellis showed the specimen.

The patient was 20 years of age, and had never enjoyed good health, having been subject to chorea. He was also considered scrofulous, but his frame was large, and he had been drilling for some time in an artillery company. A week before death he found himself unable to do his duties as before, owing to a sudden loss of strength. He was first seen by Dr. Salisbury, of Brookline, Dec. 2d. He then complained of some pain in the epigastrium, and was quite nervous, though able to be about the house. The nervousness increased to such an extent that he could not sleep. The pulse was 85, and not remarkable in character. He occasionally coughed a little, and expectorated a little bloody matter. On the evening of the 5th, dyspnœa commenced, and increased until death, on the 7th or 8th. Nothing occurred to call the attention of the attending physician to the heart.

On examination, an irregular portion of the pericardium, over the right ventricle, was white and opaque. At a little distance from this was a new formation of fibrous tissue, and on the contiguous surface of the pericardium a similar one.

The heart was quite large, and the cavities filled with liquid and coagulated blood. The hypertrophy appeared to be universal. Two of the aortic valves were fused in such a manner as to form one, and

the appearances indicated that the peculiarity was probably congenital. This large fold had been separated along a portion of its line of attachment, and through the opening thus formed the blood must have flowed freely. The edges were partially covered with recent coagula, and, where exposed, looked as if separated but a short time.

The lungs were large, and filled with blood and serum.

The abdominal organs were sufficiently healthy.

Dec. 23d. *Chronic Peritonitis.*—Dr. Minot reported the case.

The patient was a lady about 42 years old, who had been an invalid for the last twelve years, the principal symptoms being dyspepsia, muscular debility, hysteria and menorrhagia. She had been under every variety of treatment, but with no permanent benefit. The menorrhagia was excessive, and the existence of a uterine polypus or tumor had been long suspected, but though sought for, it could never be felt until June last, when, after an unusual amount of flowing, a fibrous tumor was discovered within the os uteri, about as large as a horse-chestnut. This was removed by drawing it down with hooks, and cutting it off with scissors close to the pedicle, which was about half an inch thick. The hæmorrhage was definitely arrested by the operation, but the general condition of the patient did not improve. A few weeks after the operation, she began to have nausea and vomiting, and for several weeks she apparently threw up everything she took. In August, she improved in this respect, and was able to take and retain large quantities of nourishment, which, however, was not assimilated, as she steadily emaciated. The mind became affected for the last three months of her life, and she was for a time very deaf. She died rather suddenly, seemingly of mere exhaustion, Dec. 20th. A very remarkable feature of the case was, that although considerable tuberculous disease was found in the lungs, the patient had only been noticed to cough a few days before her death, and no expectoration was ever observed; it was probably swallowed. The pulmonary disease must have been of recent origin. Dr. T. E. Francis, of Brookline, was associated with Dr. M. in the care of the patient.

The autopsy was made by Dr. Ellis. The body was excessively emaciated, and the feet were strongly flexed, and turned inward, owing to muscular contraction, which had existed several weeks before death. Convolutions of the brain, quite thin, as in the aged. The amount of serum between the convolutions, and in the lateral ventricles, was much larger than usual. Brain in other respects normal. In the upper lobe of the left lung were several irregular, yellow, friable, tubercular formations, of considerable size; also an irregular cavity, upwards of an inch in diameter, communicating freely with the bronchi. Lower lobe normal. Upper lobe of the right lung similarly, but not so extensively diseased, and without a cavity.

Old and strong adhesions existed between the liver and adjacent parts, as well as between some portions of the intestines and parietes. Just beneath the peritoneum in all parts were seen round or irregular, yellow, opaque formations, of small size, apparently tubercular. A much smaller number of the same lay beneath the mucous membrane of the intestines. Pus was smeared over the external surface, and had collected in the pelvis.

In the large intestine, about eight inches from the anus, was a large ulcer, with a dark, sharply-defined margin. Some tubercular matter was seen beneath the mucous membrane around it. In the cellular

tissue external to it was an abscess, perhaps an inch in diameter, communicating with the intestine through a large perforation in the ulcer, of which the cellular tissue appeared to have formed the base.

The gall-bladder contained eleven calculi, two large and rounded, the others small and irregular. The lining membrane was thick, of a dull, white color, and at one extremity appeared as if a large calculus had caused absorption by its pressure. The kidneys presented nothing unusual.

The uterus and its appendages were all bound together by old and strong false membrane. The uterus was two and a half inches in length. Its inner surface was reddish-white, extremely irregular, and deeply ulcerated; yellow, caseous material filling some of the depressions. A viscid substance filled the neck. Projecting from the anterior wall of the fundus was an irregularly rounded, fibrous body, half an inch in diameter, which was the pedicle from which the tumor had been removed.

Other organs sufficiently healthy.

DEC. 9th. *Chronic Abscess discharging per Vaginam; Obstinate Vomiting; Hysterical Paralysis.*—Dr. S. D. TOWNSEND reported the following case:—A woman, about 35 years of age, had had a succession of abscesses for the past five years, which opened into the vagina, and were finally attended by vomiting, which was obstinate and incessant. At last it was accidentally discovered that this symptom could be instantly controlled by raising the cervix uteri with the finger, the vomiting returning as soon as the organ was allowed to return to its natural position; the insertion of a piece of sponge into the vagina had the same effect. The patient vomited for twenty-eight days everything she ate, and was nourished by enemata of beef tea and milk with laudanum, which she said she could taste in her mouth. For two days she did not take even water into her mouth; the vomiting then stopped. She had at one time hemiplegia, with inability to raise the head or speak. On the patient being etherized, all these symptoms vanished. She is now well, with the exception of an occasional discharge of serum from the vagina and rectum.

Army Medical Intelligence.

[From our Special Correspondent.]

WASHINGTON, D. C., JAN. 1, 1862.

MESSRS. EDITORS,—The new year finds me again in a hospital, or rather a building about to be converted into one, and I therefore hope soon to give you histories of cases more frequently and perhaps of more interest. Two beautiful and very convenient buildings have lately been converted into military hospitals; the one, the block of buildings known as "Minnesota Row," in which three noted men dwelt—Douglas, Rice, and the traitor Breckenridge; and the other, a beautiful residence, two miles from the Capitol, formerly occupied by the late Mr. Gales, editor and publisher of the *National Intelligencer*. The former has almost every convenience for a hospital—hot and cold water in abundance in every room in the "Row," and each room high and large, and the whole house well ventilated. This is under the su-

pervision of Dr. Abadie, who has been superintendent of the Columbia College Hospital for some time past. The latter ("Gales House") is situated where none but healthy air prevails, and every room is also well finished, large, high and well adapted to the wants of the sick and suffering. This is under the supervision of Dr. White, who had charge of the E Street Hospital prior to its destruction by fire in November last. I have no doubt he will here sustain the reputation he won at that Hospital, which by all was said truthfully to have held the foremost rank.

Two large Hospitals, each capable of accommodating two hundred patients, are being built in Washington, one on Judiciary Square and the other on Fourteenth street. They are said, by those who have studied the plans, to be very fine ones, and to reflect great credit on the Sanitary Committee who prepared them. They are merely for temporary use, and will be finished by the first of March. New hospitals are much needed here, and even though there should be no advance this winter, I have not a doubt but that every hospital will have as many inmates as it can well accommodate. Every one now open for use is nearly full, and I understand that there are many sick in camp who cannot be admitted into them. The fevers which a month ago were so prevalent, particularly typhoid, have very much abated, and given place to pneumonia, bronchitis, measles, &c., some account of which I hope to give you ere long. I have given in this letter a brief account of some of our new military hospitals, hoping it might not be void of interest to many of your readers. In my next I shall probably resume my series of cases, and proceed as usual.

With wishing you and your readers all a "happy new year,"

I am yours, H.

Selections from Medical Journals.

Syphilis conveyed by Vaccine Lymph to forty-six Children.—We have received, says the London *Lancet*, a polite letter from Dr. Pacchiotti, and the number for Oct. 20th, 1861, of the *Gaz. della Assoc. Med.* Both these refer to a very melancholy occurrence in the village of Rivolta, near Acqui, in the province of Alexandria (Piedmont), no less than forty-six children having more or less suffered from syphilis after vaccination. The facts connected with this unfortunate wholesale contamination are as follows:—

Towards the latter end of May last, M. Cagiola, a surgeon, vaccinated Giovanni Chiabrera, aged eleven months, and in good health, with lymph obtained in a tube sent from Acqui. The operation was performed in the ordinary manner, and with, as M. Cagiola affirms, a very clean lancet. On the tenth day after this, forty-six children were vaccinated with the lymph contained in the vesicle of the child Chiabrera; and ten days after these latter operations, seventeen other children were vaccinated from the lymph of one of the forty-six infants just mentioned.

Hence we have sixty-three vaccinated children, forty-six of whom were more or less affected with syphilis within two months after the first operation. In the first series of forty-six vaccinations there were thirty-eight cases of syphilis, besides little Chiabrera, the child vaccinated with the lymph contained in the tube; and in the second series, comprising seventeen infants, seven were affected. The child Chiabrera was in a state of marasmus on the 7th of October, and the infant from

whom the second series of seventeen had been vaccinated died a month after the operation.

These facts having come to the knowledge of the Medical Congress at Acqui, from statements made by Dr. Ponza, it was agreed that a committee, elected from amongst the members of the Congress, should proceed to Rivolta to inquire into these melancholy occurrences. From the able report of Dr. Pacchiotti we extract the following particulars.

The investigations of the committee were considerably aided by the unwearying exertions of Dr. de Katt, practising in the village. It has been found that of the forty-six children affected with syphilis, the cases of only twenty-three could be accurately noted, as the parents of the children neglected to call in medical aid at the proper time. These twenty-three cases were, however, sufficient to enable the committee to come to a clear diagnosis. In the whole forty-six cases, the symptoms of syphilis appeared, on an average, on the twentieth day after vaccination—viz., varying from ten days to two months. Sometimes the vaccine vesicle, just on the point of cicatrizing, inflamed, and became surrounded with a red, livid, and copper-colored areola, and then spread and suppurated anew. At other times, when the cicatrix was complete, an ulcer would form upon it, the crusts of which would fall off and fresh ones be produced. With some children the vesicles looked bad from the first, and were accompanied by a general eruption, which the country people considered as smallpox, and the characters of which the medical men of the neighborhood were not always able to ascertain. On the 7th ult. it was discovered that seven children had died without treatment, and before attention had been directed to this unfortunately fast-spreading contamination; three were in danger, and fourteen recovering, after having been subjected to a specific treatment. Thirty-eight at that period were under treatment, which consisted of frictions with mercurial ointment in the groins, axillæ, and on the limbs, with small doses of iodide of potassium in sarsaparilla syrup.

The principal symptoms noted by the committee were:—mucous tubercles on the verge of the anus and genital organs; sores on the lips and fauces; swelling of the lymphatic glands in various regions; syphilitic eruptions of various kinds; loss of hair; secondary ulcerations of the prepuce; deep tubercles of the cellular tissue; gummy tumors, &c. Two children out of twenty-three were in a wasting condition, and suffering from syphilitic cachexia; while some of the mothers had mucous tubercles on the nipples. In fact, the twenty-three cases are carefully related in the report, all the children having been seen by the members of the committee.

As to how the disease came thus to spread among these infants, the committee refrain from coming to a hasty conclusion, and ask for time to solve the mystery; the more so as these facts tend to no less than a complete upsetting of opinions hitherto held as very trustworthy. Thus the belief of two diseases not having the power of developing at the same time upon the same individual falls to the ground, as well as the non-contagious nature of secondary symptoms of syphilis.

Dr. Pacchiotti, the author of the report, indulges in commentaries on this sad case, and throws out, with extreme humility, various explanations, though trusting completely to none. He invites discussion and reflection on the phenomena which have been observed. Nor does he fail to record that such transmission has been before noticed. Dr. Parola has mentioned in his work "On Doctrines connected with Vaccination," a case, reported by Tassani, of Milan, in which a boy, whose father had at the time secondary sores on the scrotum, was vaccinated from a healthy child. From the vesicle of this boy fifty-six children were vaccinated; out of whom, thirty-five were, in a few months, syphilitic, and had diseased their mothers. On the other hand, it should be noted, that lymph from eight of these thirty-five syphilitic children was used to vaccinate a second series of thirty-four, and *none* of the latter showed any syphilitic symptoms. Another case (which was brought before courts of justice) runs thus:—In 1846, many re-vaccinations took place in the town of K——, where a surgeon re-vaccinated about ten families on account of an epidemic of smallpox; and the punctures, in three or four weeks, degenerated into syphilitic ulcers, followed soon afterwards by secondary eruptions. Hubner, in 1852, vaccinated thirteen children; of whom the greater part became syphilitic, though the rest escaped. Experiments have been under-

taken by Pitton, Boucher, Ceccaldi, and Lecoq, which prove the transmission of syphilis through vaccination; whereas, other experiments made by Schreier, Montain, Bidart and Taupin, show, on the other hand, that vaccine lymph obtained from a child, evidently laboring under hereditary syphilis, produced no evil effects upon those vaccinated with it. The reporter further alludes to an important thesis of M. Viennois, "On the Transmission of Syphilis by Vaccination;" and to the chapter on the same subject in the book of M. Rollet, of Lyons, entitled "Clinical and Experimental Researches on Syphilis."

From the facts related above, Dr. Pacchiotti deduces the following rules:—

1. Examine carefully the child from whom the lymph is taken.
2. Try to learn the state of the parents' health.
3. Choose, in obtaining the lymph, such children as have passed the fourth or fifth month, as hereditary syphilis, in general, appears before that age.
4. Do not use the lymph after the eighth day of the existence of the vesicle, as the lymph on the ninth and tenth days becomes dull by mixture with pus, which latter may be of an infectious nature.
5. In taking lymph with the lancet, avoid hæmorrhage, as there is less danger with pure and transparent lymph.
6. Do not vaccinate too many children from the same supply.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, JANUARY 9, 1862.

The Sanitary Commission continues its useful labors, and in a variety of ways is daily contributing to the welfare of our army. Not the least valuable result from its varied industry is the publication from time to time of its special reports on particular subjects connected with the health of the troops, prepared by reliable men, with special reference to the wants of the soldiers now in the field. It is quite natural that there should be a disposition occasionally manifested among old army surgeons to regard with some jealousy the operations of this Commission, as trenching somewhat on their peculiar domain, and tending to thrust them aside from the honor and responsibility which their professional *esprit* leads them to seek in the present emergency. Such feelings, we say, are natural, and it is all the more gratifying to know that they have not been so manifested as materially to interfere with the usefulness of the Commission. Obviously it is highly desirable to place in the hands of the medical officers of the volunteer regiments the most accurate, and at the same time the most condensed synopsis of professional experience in this department up to the present moment, without subjecting the inquirer to the necessity of going through long treatises on the subject, many of the most valuable of which, perhaps, are not easily accessible. Called so hastily, as they have been, from civil to military life, many of our surgeons cannot have had the time for a thorough reduction of all the information within their reach to a practical shape; and while in the service, their time for reading must necessarily be very limited. Hence the value of these Reports, as they are called, which are issued by the Commission from time to time, and some of which are of a high order of merit. One of them, which we have before us, is the Report on Military Hygiene and Therapeutics, prepared by a Committee of the New York Academy of Medicine, consisting of Drs. Alfred C. Post and

William H. Van Buren, and which is an admirable illustration of what we have said above. It is a condensed, practical treatise on this comprehensive subject, of only twenty-seven pages, but filled from beginning to end with just the information which was needed. Very valuable statistical results from numerous European authorities are given, based on the experience of their armies, from Waterloo to the taking of Sebastopol, which probably not one in a hundred of our volunteer surgeons could have obtained from any other source. The subjects of encampments in all their hygienic relations—the food and clothing, and the precautions to be taken for the preservation of the health of the men; the best methods of constructing and managing the Camp hospitals; the duties of the surgeon on the field of battle, and the inspection of recruits, are all included in this little pamphlet. The following extract contains some interesting statistics:—

The general practice of the French surgeons in the Crimea was to extract foreign bodies from wounds at an early period, whenever they were easily accessible. The most efficient styptics in arresting hæmorrhage, where the bloodvessels could not be conveniently tied, were the perchloride and the persulphate of iron. Amputations were generally resorted to in severe injuries of the limbs, and the results were more favorable than when conservative surgery was attempted. Primary amputations were much more successful than secondary. Scrive makes an exception to this rule in the case of amputation of the hip-joint. Nine primary amputations at this joint were performed by the French surgeons in the Crimea, and in all death took place within a few hours after the operation. There were three consecutive amputations at the hip; the patients severally lived five, twelve, and twenty days. Resections were generally fatal, except in the upper extremity. Scrive remarks, that when amputation was performed a day or two after an injury, it was much more difficult to induce anæsthesia than when the amputation was performed on the same day. The amputations were as follows: hip, 12; thigh, 1,512; knee, 58; leg, 915; foot, 241; toes, 220; shoulder, 168; arm, 912; elbow, forearm, and wrist, 278; hand and fingers, 282. The average dressings for each patient were: of linen, 2,482 grammes; roller bandages, 891 grammes; charpie, 1,181 grammes. The weight of dressings during the campaign amounted to 196,000 kilogrammes. (A gramme is about 15 grains; a kilogramme, 2 lbs. 8 oz. troy weight.) Average number of dressings for each wounded person, 35; total number of dressings, 1,400,000. Number of surgeons wounded by the fire of the enemy and by the explosion of magazine, 19. One died in consequence of his wounds. The labors of the surgeons were excessively severe. Each surgeon, on an average, was obliged to visit daily more than one hundred patients. Eighty-three French army surgeons died during the war. It is very evident that the amount of labor thrown upon the medical officers of the French army was unreasonably great, and that the number of these officers should have been largely increased. When an army is called into active service, and is exposed to pestilential diseases and bloody engagements, a much larger amount of medical service is required than can reasonably be expected of a surgeon and an assistant surgeon to each regiment.

Farther on, the report says that:—

The result of primary amputations at the hip-joint is so uniformly disastrous, that, in the opinion of your Committee, these operations should be discarded from military surgery. If the patient should in any case recover from the shock of the terrible injury which seems to require so formidable an operation as amputation at the hip-joint, the operation may be performed consecutively with better prospect of success, without diverting the attention of the surgeon, at this period, from a more hopeful class of cases.

There is another subject which your Committee would bring to the notice of the surgical section of the Academy; viz., the injurious consequences resulting from the hasty removal of the sick and wounded by a discomfited and retreating army. Under these circumstances, your Committee would suggest the expediency of leav-

ing the sick and wounded, with a sufficient number of medical attendants, to fall into the hands of the enemy as prisoners of war, in all cases in which there is a large number of patients whose lives would be greatly endangered by the removal, and in which reliance could be placed on the magnanimity of the victorious party. There might be a previous understanding between the belligerent parties, that hospital buildings, or tents, so abandoned, and surmounted by a flag of truce, or some other preconcerted signal, should be safe from attack.

Want of space prevents our making more extended extracts, and it is difficult to make selections where all is so good. We may have occasion hereafter to notice other reports of a similar character published by the Commission, convinced as we are that they are calculated to do much good.

Dr. Wm. J. Dale, Surgeon-General of this State, has been appointed by the United States War Department Acting Surgeon of the Army for Boston and vicinity. He will perform the duties of this office conjointly with those of his office in the State Medical Department.

Dr. Charles W. Moore, of Boston, has been appointed Surgeon, and Dr. A. F. Hall Assistant Surgeon, in the Eastern Bay Regiment, attached to Gen. Butler's Division, about to sail for Ship Island.

Dr. G. A. Wilbur, of Skowhegan, Me., has been commissioned as Surgeon of the 11th Maine Regiment, now encamped at Meridian Hill, near Washington.

Dr. David Wooster, Editor of the *Pacific Medical and Surgical Journal*, San Francisco, having been appointed Surgeon and Medical Director in the U. S. Army for the Department of the Pacific, has resigned the editorship of the Journal, and it will hereafter be conducted by Dr. James Blake, formerly of Sacramento, but now of San Francisco.

The Annual Catalogue of Students attending Lectures at the Massachusetts Medical College the present season, just published, shows the number to be 204.

VITAL STATISTICS OF BOSTON.

For the Week ending Saturday, January 4th, 1861.

DEATHS.

	Males.	*Females*	*Total.*
Deaths during the week,	36	29	65
Average Mortality of the corresponding weeks of the ten years, 1851-1861,	40.4	39.3	79.7
Average corrected to increased population,	..	..	88.47
Deaths of persons above 90,	..	2	2

Mortality from Prevailing Diseases.

Phthisis.	Chol. Inf.	Croup.	Scar. Fev.	Pneumonia.	Variola.	Dysentery.	Typ. Fev.	Diphtheria.
10	0	6	3	3	0	0	1	0

METEOROLOGY.

From Observations taken at the Observatory of Harvard College.—For the week ending Dec. 28th.

Mean height of Barometer,	29.943	Highest point of Thermometer,	43.0
Highest point of Barometer,	30.472	Lowest point of Thermometer,	6 0
Lowest point of Barometer,	29.024	General direction of Wind,	W.N.W.
Mean Temperature,	22.9	Am't of Rain (inches),	1.89

Communications Received.—The Mechanical Distortions of the Human Foot, their Prevention and Remedies.—Case of Meningitis.

Died,—In Rowley, Jan. 3d, Dr. Joshua Jewett, 93 years 4 months.

Deaths in Boston for the week ending Saturday noon, January 4th, 65. Males, 36—Females, 29.—Disease of the bowels, 1—inflammation of the brain, 1—bronchitis, 3—cancer, 4—consumption, 10—convulsions, 1—croup, 6—cystitis, 2—debility, 1—dropsy, 2—dropsy of the brain, 2—drowned, 1—epilepsy, 1—scarlet fever, 3—typhoid fever, 1—disease of the heart, 1—hernia, 1—infantile diseases, 3—intemperance, 2—disease of the kidneys, 1—congestion of the lungs, 2—inflammation of the lungs, 3—marasmus, 1—old age, 2—pleurisy, 1—purulent absorption, 1—teething, 1—unknown, 4—whooping cough, 3.

Under 5 years of age, 25—between 5 and 20 years, 7—between 20 and 40 years, 12—between 40 and 60 years, 17—above 60 years, 4. Born in the United States, 44—Ireland, 12—other places, 9.